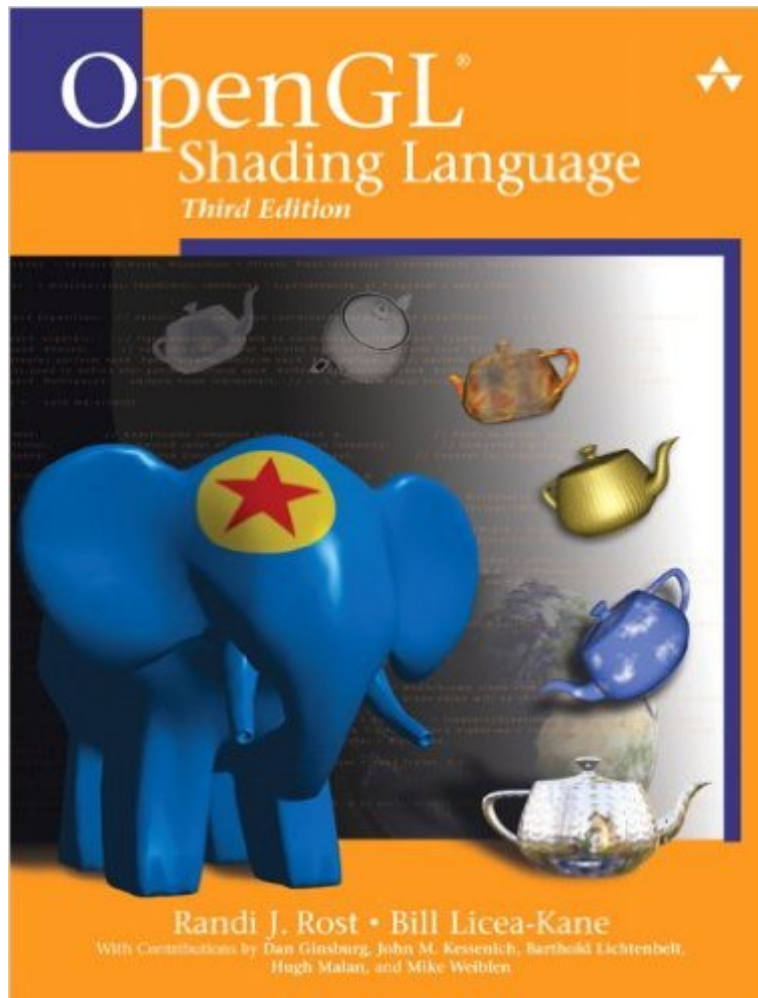# The book was found

OpenGL Shading Language

Synopsis

OpenGLÂ® Shading Language, Third Edition, extensively updated for OpenGL 3.1, is the experienced application programmerâ ™s guide to writing shaders. Part reference, part tutorial, this book thoroughly explains the shift from fixed-functionality graphics hardware to the new era of programmable graphics hardware and the additions to the OpenGL API that support this programmability. With OpenGL and shaders written in the OpenGL Shading Language, applications can perform better, achieving stunning graphics effects by using the capabilities of both the visual processing unit and the central processing unit. Â In this book, you will find a detailed introduction to the OpenGL Shading Language (GLSL) and the new OpenGL function calls that support it. The text begins by describing the syntax and semantics of this high-level programming language. Once this foundation has been established, the book explores the creation and manipulation of shaders using new OpenGL function calls. Â   OpenGLÂ® Shading Language, Third Edition, includes updated descriptions for the language and all the GLSL entry points added though OpenGL 3.1, as well as updated chapters that discuss transformations, lighting, shadows, and surface characteristics. The third edition also features shaders that have been updated to OpenGL Shading Language Version 1.40 and their underlying algorithms, including Â Traditional OpenGL fixed functionality Stored textures and procedural textures Image-based lighting Lighting with spherical harmonics Ambient occlusion and shadow mapping Volume shadows using deferred lighting Wardâ ™s BRDF model Â The color plate section illustrates the power and sophistication of the OpenGL Shading Language. The API Function Reference at the end of the book is an excellent guide to the API entry points that support the OpenGL Shading Language.

Book Information

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Customer Reviews

The Third Edition is not very different from the Second. (Which is a good book.)Very minor changes from the 2e. Someone tried to hack out the deprecation but the new stuff lacks adequate explanation and doesn't always work. There are no new shaders presented showing how to benefit from the new capabilities of GLSL.The index has not been updated to include the mentions of new features or commands. For instance glTransformFeedbackVarying, glBeginTransformFeedback, and glBindBufferBase are briefly mentioned in the book but they have not been indexed nor have they been added to the glossary nor are they included in the API Function Reference in Appendix B.New commands gl_VertexID and gl_InstanceID are listed but no examples are given as to what they are used for. Other new commands are not even mentioned, such as glPrimitiveRestartIndex.It's web-site 3dshaders.com is not working. So, no source code is available for the third edition.The author's email is listed in the book but there is no response and I believe it is a not a working address.The publisher's web-site has a link to download source code for the book, but its the code from the 2nd edition without any updating.

The authors honestly warn the user that this book is not intended to be read from start to finish in sequential order. Cannot agree more. The material is scattered through the book with little logical order. Very often I find myself putting the book aside and going to Internet after futile attempts to find even some basic information.For example GLSL defines a number of special embedded variables, but you will not find a list of those variables and especially examples of using them. Instead they are scattered in the text.A good part of the book is just examples of solving some fancy tasks. GLSL is a very interesting and exciting subject and I expected to find something more useful when ordering this book.Save your money.

The book covers all you need to know to write opengl shaders. There are a number of examples

covered, with source both in the book and available for download. The writing is understandable and comprehensive, if ponderous.My only complaint is the encyclopedic nature of the book. Tons of man page like reference material in the back and throughout.It lacks the inspiration of a book like Frank Luna's DirectX, where he develops techniques like normal mapping, cascaded shadow maps, etc.. with all the relevant math details.But, if you have those details, this book has everything you need to implement them in GLSL. So a good buy.

I don't usually write reviews, but this book deserves one.This book serves well to someone that has some familiarity/experience with setting up an OpenGL environment on whatever platform. (ie. each implementation of opengl has its quarks, but for iOS this involves setting up the EAGLContext, override layerClass to return CAEAGLayer, setting up vertex buffer objects, render buffers, and framebuffers, blah blah) If you don't understand that aspect you'll find yourself reading the book and thinking 'thats great, but how do i set this up initially?' However if you're like me, and can set up the GL environment, but lacked some insight on what exactly can be accomplished with vertex/fragment shaders then you'll be in for a treat. This book does a nice job of explaining the process of creating shaders (and their corresponding gl_programs). This book doesn't treat the reader like an idiot, but it also doesn't treat you like you were a designer of OpenGL; its a good compromise in the middle. The general flow of the book is having a detailed explanation of what is going on in a shader, then it shows you the code for said shader. If you're patient and willing to cross-reference the text and the code, and touch base with the underlying math where you find yourself lacking, you should come out with a better understanding of how to achieve certain effects (lighting, shadows, noise, etc.) Goodluck

This book does an excellent job of explaining the perks and quirks of writing shaders. From novice to professional this book is a must have as it explains the whole concept of shaders, their need as it arose through the history of the graphics API wars, a quick introduction to Open GL and its relationship to GLSL as well as the interfacing code that needs to be written to connect the dots between OpenGL and GLSL. Full details of the GLSL language are included and explained in a gradual manner.The book proceeds to give an overview of how a shader is written from beginning to end. Then a fully detailed description of each of the intermediate steps is given. The discussion proceeds as a tutorial taking the reader by the hand and in a step-by-step manner teaches how to write the most widely used shaders in the graphics industry while at the same time it gives enough instruction to enable the reader to invent their own shaders if they need to.In all, a very well written

and rounded book that begins slowly and generally at first while gradually adding the necessary detail. Written in a simple language without sacrificing technical rigor. A tutorial for the novice and also an invaluable reference in finding quickly whatever a shader developer might need. A must have for everyone interested in developing modern accelerated graphics applications.

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